

REMARKS/ARGUMENTS

Claims 1-6 and 10-14 are currently pending in the above-captioned application. Applicant's comments are as follows:

1. Restriction Requirement.

Applicants note that their traverse has been rejected and that therefore the Examiner's rejection in this regard is now FINAL. However, Applicants reserve the right to file a divisional application on the non-elected species.

2. Inventorship 37 CFR 1.48(b).

Applicants note the potential need to amend the inventorship due to the cancellation of claims to a non-elected species – in this case claims 15-19. No changes are believed necessary for the claim set currently being examined due to the Restriction Requirement.

3. Claim Rejections 35 USC § 102.

Claims 1-6 and 9-13 stand rejected as lacking novelty over Fuji Photo to JP 05-31330 ("Fuji").

Claim 1 has been amended to specify that the "target bonding group" (F) is chosen from a reactive group, a functional group or an affinity tag. Basis can be found at [0017] and [0022] in the specification plus Claims 7 to 10. Claim 1 has also been amended to specify that only a single group –E-F is attached. Basis can be found in the first sentence of [0017] in the specification. Applicants therefore contend that no subject matter has been added by the amendment.

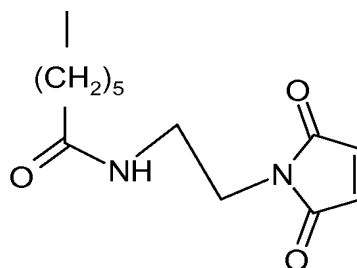
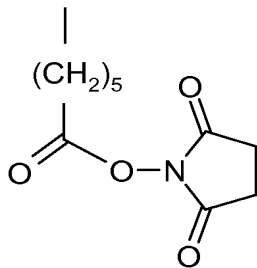
Applicants point out that the definition of F now clearly excludes a sulfoalkyl group as taught by Fuji. For the avoidance of doubt, Applicants also point out that a 'sulphydryl' group is a conventional chemical substituent term for a thiol group (-SH), which is different to the sulfoalkyl groups $-(CH_2)_3SO_3H$ of JP 05-31330.

Since Fuji does not teach dyes having a single substituent –E-F within the scope of amended Claim 1, Applicants contend that amended Claim 1 is novel over Fuji. By definition, dependant claims 2-6 and 10-14 are also believed novel over Fuji. The novelty objections based on Fuji should therefore be withdrawn.

Claims 1-6 and 9-13 also stand rejected as lacking novelty over Fuji Photo to JP 04-186342 (“JP 04-186342”). Similar logic to Fuji (above) applies – hence amended Claim 1 is believed novel over JP 04-186342. By definition, dependant claims 2-6 and 10-14 are also believed novel over JP 04-186342. The novelty objection based on JP 04-186342 should therefore be withdrawn.

Claims 1-6 and 9-13 also stand rejected as lacking novelty over Leung *et al* to US 6974873 (“US 6974873”).

Applicants point out that, as argued above, the definition of F of revised Claim 1 excludes a sulfonic acid group. The only substituents of Leung which could possibly fit within the definition of –E-F are:



The dyes of Leung therefore have the –E-F substituent specifically at one of the R¹¹, R¹², R¹³ and R¹⁴ positions of present Formula I. The definitions of present Formula I are such that:

- (i) at least one of the groups R¹¹, R¹², R¹³ and R¹⁴ must be –(CH₂)_k–W, with the remaining groups being independently C₁–C₆ alkyl;

- (ii) the substituent –E–F must be located at one of positions R^1 , R^2 , R^3 , R^4 , R^5 , R^6 and R^7 .

For both these reasons, amended Claim 1 is believed novel over Leung. By definition, dependant claims 2-6 and 10-14 are also believed novel over Leung. The novelty objections based on Leung should also therefore be withdrawn.

4. Claim Rejections 35 USC § 103.

Claims 1-6 and 9-14 stand rejected as being obvious over Leung *et al* to US6974873 (“US 6974873”).

The Examiner suggests that the present dyes differ from those of Leung “...only in the organic groups that decorate the core structure”. Applicants suggest that is an oversimplification. Thus, Leung teaches throughout that the 3-position of the indolium ring is the preferred location for attaching proteins, nucleic acids etc. Leung describes the advantageous properties conferred by attachment at that 3-position in detail. See Leung at: Column 1 lines 49-67; Column 3 lines 12-17; Examples 1, 2, 7-19, 21-24, 26-28, 49-50, 52 plus Claim 1 R^3 group; and Claims 2-5 active ester substituents.

Hence, Applicants contend that the person skilled in the art considering modification of Leung would retain the feature of conjugating biomolecules at the 3-position of the indolium ring. Such modifications would inevitably fall outside the scope of the present claims, since present Claim 1 requires that the E-F substituent is attached elsewhere, and excluded from the 3-position of the indolium ring, because completely different substituents [$-(CH_2)_k-W$ or C_1-C_6 alkyl] are located there (*see 3 above*). Applicants contend that it cannot be an obvious modification of Leung to deviate from the substitution pattern taught clearly therein to be advantageous. The person skilled in the art would expect such a modification to lead to loss of the advantageous properties taught by Leung, and could therefore have no motivation to modify Leung in the direction of the present claims.

Present amended claim 1 is therefore believed to be inventive over Leung. By definition, dependant claims 2-6 and 10-14 are also believed inventive over Leung.

Applicants contend that the obviousness rejections based on Leung should therefore be withdrawn.

CONCLUSION

In view of the amendments and remarks herein, Applicants believe that each ground for rejection or objection made in the instant application has been successfully overcome or obviated, and that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and objections, and allowance of the current application are respectfully requested.

The Examiner is invited to telephone the undersigned in order to resolve any issues that might arise and to promote the efficient examination of the current application.

Respectfully submitted,

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